

## THERAPEUTICS

UNDER THE CHARGE OF

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**The Nature of Pneumonia and the Serum Treatment.**—COLE (*New York Med. Jour.*, 1917, cv, 233) from a study of pneumonia at the Rockefeller Institute, reports that most cases of pneumonia are caused by pneumococci which can be divided into at least four-types. Over 500 cases of pneumonia have been studied for the purpose of determining the relative frequency of the different types of infection. The results showed that 60 to 65 per cent. of all cases were due to pneumococci of Types I and II, while 10 to 15 per cent. were due to pneumococci of Type III, the remaining 25 per cent. being due to pneumococci belonging to Type IV. Studies were also made to determine the frequency of occurrence of the different types in mouths of normal persons. In examinations of 527 people, 254, or about half, showed pneumococci. They belonged to the Type IV group in 75 per cent. In 17 per cent. the pneumococci were of the Type III group, while in less than 12 per cent. they were of the so-called fixed Types I and II. In practically all the instances in which organisms of Types I and II were found in normal mouths, it was possible to trace a close relationship between these individuals and a case of pneumonia of the same type. Pneumococci of Types I and II tend to disappear from the mouth in a short time as after convalescence from pneumonia. The author believes that isolation of cases of pneumococci of Types I and II should be more strictly observed than is the usual practice. With the present knowledge it was not possible to have an opinion on the value of isolation of cases due to pneumococci of Type III. Probably no effect would be obtained by isolation in cases of infection with Type IV. With regard to specific treatment the author believes that vaccine treatment is without much beneficial effect. He has made use of serum prepared from animals made immune to organisms of the different types. He notes that on account of the specificity of types it is necessary to determine the type of infecting organism in each case before instituting serum therapy. This determination of type of organism is of important prognostic value. The author has used immune horse serum prepared against the three important Types I, II, and III. The serum against pneumococci of Type I was of high power, that of Type II was considerably less powerful while that of Type III had very little effect, either in the test-tube or on experimental animals. So far no attempts have been made to use the serum on patients with Type III infection. A limited trial has been made with serum against pneumococci of Type II, but the results have not been promising. The use of immune serum against infection with organisms of Type I, however, has given very gratifying results and experience indicated that with proper

use this serum had great therapeutic value. In the hospital of the Rockefeller Institute, 78 cases were treated with 6 deaths. The mortality was 25 per cent. in cases due to Type I infection, before the serum was used, so that it was evident that the serum was of considerable value. Of the 6 fatal cases, 1 died on the fifty-third day following pneumonia from general streptococcus infection; 1 died during convalescence from pulmonary embolism; 3 were treated only on the day of death late in the disease, leaving but 1 fatal case that received treatment over two days. In order to obtain the best results certain rules must be observed. First, serum must be given in large amounts intravenously, and its administration must be commenced as early in the disease as possible; its use must be continued until infection was definitely overcome. Before administering the serum a small dose of normal horse serum should be given subcutaneously in order to desensitize the patient in case he was sensitive to horse serum. Among the treated cases the evidence of empyema has been greater than in the untreated cases. This probably meant that in a large number of the cases, otherwise fatal, the infection was localized instead of becoming general.

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**A Report on the Treatment of Pernicious Anemia by Transfusion and Splenectomy.**—Giffin (*Jour. Am. Med. Assn.*, 1917, lxxviii, 429) says that there is no evidence that splenectomy has cured pernicious anemia. A review of 31 cases of splenectomy for pernicious anemia demonstrates a definite gain in the blood, the weight, and the general condition during the first three months of the postoperative period in 78 per cent. of the cases; during the second three months' period, 68 per cent. of living patients maintained their gain. A consideration of the advisability of splenectomy would seem to be warranted at present chiefly in young and middle-aged patients of good general resistance, who show evidence of active hemolysis and in whom the spleen is moderately enlarged. The estimation of the blood-derived pigments in the duodenal contents is valuable in determining the degree of hemolytic activity present at a given time. A comparison of the degree of hemolysis with the severity of the anemia would seem to be indicative of the productive power of the bone-marrow. Preoperative treatment, especially transfusions, should be employed to influence the general condition of the patients and to improve the characteristics of the blood picture. The operative risk is increased when the hemoglobin is below 35 per cent. and the erythrocyte count less than 1,500,000 cells. Postoperative transfusions have not been given as a routine procedure, but transfusions have been successfully employed in postoperative relapse.

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**The Treatment of Tuberculous Pericarditis by the Induction of an Artificial Pneumopericardium.**—Weil and Loiseleur (*La Presse Méd.*, 1916, xxiv, 601) recommend the introduction of air into the pericardial sac after paracentesis of a pericardial effusion by employing a similar technic as in treating a pleurisy with effusion by artificial pneumothorax. They cite a case treated in this way with the treatment controlled by frequent roentgen-ray examinations. They believe that adhesion of the pericardial layers can be prevented